

## **Remarks**

Applicants thank the Examiner for the careful examination of this application and the clear explanation of the rejections.

The amended title conforms to the claimed matter.

Support for the word “standard” in the claims comes from the specification as originally filed. The specification uses an abbreviation “Std” for the word “standard” when mentioning the “IEEE Std 802.11b systems” in paragraph [0003]. The Bluetooth 1.0 and Bluetooth 2.0 systems also mentioned in that paragraph also use standard, fixed wireless frequency channels.

The new claims obviate the rejections under 35 USC 103. The new claims “particularly point out and distinctly claim the subject matter the applicant regards as his invention.”

New claim 43 defines a process of selecting a standard wideband wireless communication channel from among standard wideband wireless communication channels. Each standard wideband wireless communication channel is formed of narrowband channels.

The process determines that a new standard wideband channel is needed.

The process tunes a filter to a selected narrowband channel of one standard wideband channel.

The process observes the channel quality of the selected narrowband channel.

The process repeats the steps of tuning and observing for the narrowband channels in the one standard wideband channel.

The process sums the observed channel qualities of the narrowband channels observed in the one standard wideband channel.

The process repeats the steps of tuning, observing, repeating and summing for the narrowband channels of another, different standard wideband channel.

The process selects the one or the other standard wideband channel based on the summed narrowband channel observations for each standard wideband channel.

In contrast, US 5,907,812 to Van de Berg addresses the inefficiencies in assigning special frequency bands or radio channels to specific operators, prohibiting the use thereof by others. (column 2, lines 8-10) Instead of using fixed or standard channels for first and second communications systems, the disclosure directs the art to use variable adjacent channels for the second system between fixed channels of the first system, Figures 2 and 5, or to use

variable adjacent channels between channels with interference for any system, Figure 4.

Different from the prior art transmission schemes, according to the directions in the Van de Berg patent, communication can be established over any part of the radio frequency band covering the communication frequency band of the particular radio system or technology. The actual occupation of a part of the radio frequency band depends on whether this part, from an interference point of view, is available for transmission, i.e. essentially idle. (column 3, lines 7-17)

Different from the prior art transmission schemes, according to the directions in the Van de Berg patent, the number of allocatable carrier frequency positions is made substantially greater than the number of communication frequency bands which fit into the radio frequency band. (column 4, lines 40-48)

By defining a fine grid of carrier positions, i.e. wherein the spacing between adjacent carrier frequency positions is less or substantially equal to the smallest communication frequency band of a radio technology to be used, a great flexibility in choosing the best or optimum carrier position can be achieved. This, [is] essentially equal to the embodiment of the invention wherein the radio frequency band is scanned and allocated in a non-discretely(sic) manner. (column 4, lines 49-56)

The concept of the invention is illustrated in FIG. 2. The radio frequency band R is sub-divided into a number of adjacent carrier frequency

positions or fixed radio channels  $C_1^1$  to  $C_{25}^1$ . The first system uses fixed or standard radio channels  $C_1^1$ ,  $C_7^1$ ,  $C_8^1$ ,  $C_{19}^1$ , and  $C_{25}^1$ . The second system normally would be allowed to occupy only fixed or standard channel  $C_3^2$ , but according to the disclosure, is allowed to occupy any variable part of the radio frequency band R having the size of the communication bandwidth  $B_{C2}$  between the fixed radio channels of the first system.

Following the method of the Van de Berg disclosure, the second system will scan the radio frequency band R to find a part having the width of the communication frequency band  $B_{C2}$  and, in this particular embodiment, is not disturbed by a transmission of the first system. Assuming the same channel occupation as illustrated in FIG. 1, with the method of the disclosure not less than four separate parts of the radio frequency band R can be occupied by the second system for establishing communication without disturbing the first system or otherwise, as indicated by triangles in FIG. 2. (column 7, lines 56-65)

The Van de Berg patent thus sub-divides the entire radio band into a fine grid of adjacent carrier frequency positions. The interference at each carrier position between the fixed, standard radio channels is scanned for interference and when sufficient variable, adjacent carrier frequency positions are interference free, then communication for the second system is established over those adjacent carrier frequency positions. Apparently a second system that requires fixed or standard channels for communication would not operate on this embodiment.

The Van de Berg patent thus discloses a system in which devices of a first system communicate on fixed, standard channels and devices of a second system communicate over variable channels between the fixed, standard channels of the first system.

Selection of one standard channel from among the fixed or standard channels of the first system and the quality of the signals in the standard channels is not mentioned in the disclosure of the Van de Berg patent.

According to the embodiment of Figures 3 and 4, one system can communicate over variable channels of radio frequency band R by scanning for adjacent interference free channels  $C^1_x$ , without the presence of fixed radio channels. Apparently a system that requires fixed or standard channels for communication would not operate on this embodiment.

New claim 43 distinguishes over the disclosure of the Van de Berg patent with the limitations of selecting among different standard wideband wireless communication channels. A person of ordinary skill seeking to select among standard wideband wireless communication channels would be lead away from the present claims by the Van de Berg patent disclosure that teaches changing fixed radio channels to variable radio channels or would discard the Van de Berg patent disclosure as not being helpful in selecting among standard wireless channels.

Further, new claim 43 distinguishes over the disclosure of the Van de Berg patent by requiring the tuning, observing, repeating and summing for the narrowband channels of one standard wideband channel and then

repeating the tuning, observing, repeating and summing for the narrowband channels of another, different standard wideband channel before selecting the one or the other standard wideband channel.

US 6,594,495 to Salonaho discloses a CDMA method and a radio system for changing a telecommunication rate. This patent does not mention selecting one standard wideband channel from among different standard wideband channels.

The Salonaho patent discloses changing the telecommunication rate by comparing a threshold value with a load result formed by comparing a combined signal strength of signals with a total strength of inferences and signals.

The combined signal strengths or load result apparently are not used to select among different CDMA or other standard wideband channels. A person of ordinary skill in this art would not learn from the Salonaho patent to select among different wideband channels.

New claim 43 distinguishes over the disclosure of the Salonaho patent with the limitations of selecting among different standard wideband wireless communication channels. A person of ordinary skill seeking to select among standard wideband wireless communication channels would be lead away from the present claims by the Salonaho patent disclosure of changing telecommunication rates or would discard the Salonaho patent disclosure as not being helpful in selecting among standard wireless channels.

Further, new claim 43 distinguishes over the disclosure of the Salonaho patent by requiring the tuning, observing, repeating and summing for the narrowband channels of one standard wideband channel and then repeating the tuning, observing, repeating and summing for the narrowband channels of another, different standard wideband channel before selecting the one or the other standard wideband channel.

Applying the limited teaching of the Salonaho patent of combining signal strengths and the combined interference or total strength signals to the scanning of the grid of carrier frequency positions of the Van de Berg patent would only result in establishing communication over variable, adjacent carrier frequency positions (not standard wideband channels) free of interference. The suggestions of the Salonaho patent with those of the Van de Berg patent do not suggest the claimed selecting among standard wideband channels or the claimed tuning, observing, repeating and summing for the narrowband channels of one standard wideband channel and then repeating the tuning, observing, repeating and summing for the narrowband channels of another, different standard wideband channel before selecting the one or the other standard wideband channel.

Claim 43 stands allowable.

The depending claims also stand allowable as depending from allowable independent claim 43 and as including, in combination with the limitations of the independent claim, additional distinguishing limitations.

The application is in allowable form and the claims distinguish over the cited references. Applicants respectfully request reconsideration or further examination of this application.

Respectfully Submitted,

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